

# Online Travel Agent Marketing Strategy Through Social Interaction During the Pandemic COVID-19

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**Abstract**— The Covid-19 pandemic has had such a devastating impact on Online Travel Agents such as Traveloka that it has made it to the lowest phase it has ever experienced. There are government regulations that limit people's social interactions so that various strategies are carried out, from using promos or utilizing application features. The purpose of this research is to find out whether the difference in social interaction between Traveloka users before and during the Covid pandemic was significant enough to evaluate Traveloka's marketing strategy. Decreased application usage, ticket rescheduling requests to refund requests which are currently Traveloka's problems. This research is qualitative research that uses the Social Network Analysis (SNA) method using the Twitter application assisted by the Jupyter Anaconda application, Google collab, and Ghepi. From the visualization of this study, the results obtained from 3 research focuses had significant differences from social interactions using Traveloka during the pandemic. From promos that experienced a decrease in interaction during the pandemic, Traveloka Xperience experienced an increase in feature usage, and the ticket feature experienced a decline in social interaction. So that Traveloka is expected to improve the company's strategy to survive during the pandemic.

**Keywords**— *Online Travel Agent, Twitter, Promotion, Application Feature*

**Abstrak**— Masa pandemi Covid-19 memiliki dampak yang begitu buruk bagi *Online Travel Agent* seperti Traveloka yang menjadikan fase terendah yang pernah dialaminya ditambah adanya aturan pemerintah yang membatasi interaksi sosial masyarakat sehingga berbagai strategi dilakukan dari penggunaan promo ataupun memanfaatkan fitur aplikasi. Tujuan dari penelitian ini mengetahui perbedaan interaksi sosial pada pengguna Traveloka disaat sebelum dan selama masa pandemi covid apakah memiliki perbedaan yang cukup signifikan guna mengevaluasi strategi pemasaran traveloka. penurunan penggunaan aplikasi, permintaan resechedule tiket sampai permintaan pengembalian dana yang menjadi permasalahan traveloka saat ini. Penelitian ini merupakan penelitian kualitatif yang menggunakan metode Social Network Analysis (SNA) menggunakan aplikasi Twitter yang dibantu aplikasi Jupyter Anaconda, Google colab, Ghepi. Dari visualisasi penelitian ini memperoleh hasil dari 3 fokus

penelitian memiliki perbedaan yang signifikan dari interaksi sosial penggunaan Traveloka selama masa pandemi. Dari promo mengalami penurunan interaksi selama masa pandemi, Traveloka Xperience mengalami peningkatan penggunaan fitur, dan fitur tiket mengalami penurunan interaksi sosial. Sehingga traveloka diharapkan untuk meningkatkan strategi perusahaan untuk bertahan di masa pandemi tersebut.

**Kata Kunci** — *Online Travel Agent, Twitter, Promo, Fitur Aplikasi*

## I. INTRODUCTION

The Covid-19 pandemic that entered Indonesia in 2020 had an adverse impact both in terms of the economy, society, politics, and other sectors [1]. It's not only Indonesia that feels it. Other countries, almost the whole world, are also affected by the Covid-19 pandemic. With that, the government makes rules to deal with the Covid-19 pandemic with policies for social distancing, physical distancing, large-scale social restrictions (PSBB) [2]. Expectations and expectations have been raised that experiences, habits, and improvements to digital services developed or discovered during a pandemic can lead to a permanent decrease in travel volume, even in the long term. [3]. This policy has an impact, especially on the tourism sector and travel or accommodation companies which, of course, cannot operate optimally due to the PSBB. Travel has become a trend lately in several countries, including Indonesia. Still, since the pandemic, everyone has stopped not going anywhere, which has significantly impacted E-Commerce in the Travel Industry, where people cannot use travel services during a pandemic. E-commerce in the travel industry can be called an online travel agent (OTA) [4]. Online travel agency (OTA). OTA is a third party that resells services using on behalf of other companies [5]. The growth of OTA has a positive impact on various aspects. OTA itself offers a package concept where consumers can order flight tickets directly along with their accommodation on one platform [6]. Traveloka, Tiket.com, Agoda, Pegi-

Pegi, and other OTAs are popular in Indonesia. The OTA that occupied the first level in Indonesia was Traveloka in 2017 and received funding from Expedia of USD 350 million. Behind Traveloka's progress, Traveloka has many competitors who offer online ticket bookings or accommodations that provide many customer facilities such as benefits, both promos, and convenience [7].

Traveloka has had an impact that caused the company to experience a crisis due to a decrease in the number of Traveloka application users during this pandemic.. Traveloka continues to improve its quality by developing its features and holding promos or discounts. There are several things that Traveloka needs to pay attention to, such as making it easier to use the Traveloka application, increasing positive information about safe travel with suitable health protocols, and increasing content marketing through advertisements on social media [8]. Promotion theory, according to Kotler And Armstrong Promotion means activities communicate the product's merits and persuade target customers to buy it [9]. Promos are Traveloka product offers where product prices are lower than sales prices to increase these sales [10]. Traveloka often does promos, but some consumers say Traveloka rarely holds promos, so many consumers complain about that. One of Traveloka's features to improve Traveloka's marketing strategy is launching Traveloka Xperience, where all these features complement everything, such as spa & beauty, playgrounds, cinemas, transportation, food and drink, events, and entertainment, and there is still much that Traveloka Xperience offers [11]. Traveloka Xperience is a ladder to continue to make progress, so many people like this feature. Then there is the ticket feature. The ticket feature in this study is a combination of various tickets from airplane, train, bus, and hotel tickets. In the past, it wasn't easy to get access to the station, and now it's easy for consumers who want to travel or travel long distances to simply order a ticket. Traveloka online application [12].

This research analyzes the focus on discussion of Traveloka consumers through social media because the high number of social media users is expected to be able to find out consumer reviews or as a means for companies to develop their strategies. There are many kinds of social media: Instagram, Twitter, Facebook, and YouTube. The social media used in this research is Twitter. Social media Twitter is used as a medium for data collection because Twitter is one of the social media that is most actively used by Indonesian people and includes media that is always up to date with trending information. Of the many Twitter users expressing messages, ideas, opinions, feelings, understanding, and beliefs through Twitter posts [13]. Youtube, Instagram, and Facebook have several reasons they can't use. The data taken from this study is in the form of text. Namely, in the form of reviews from users on Twitter, what topics do users discuss and express related issues in the Traveloka application [14]. Withdrawal of data

via tweets and users is taken through keywords determined by the researcher. This study uses SNA (social network analysis) as a reference to analyze. SNA is part of a social computing technique for extracting information from unstructured data and having large volumes (Big Data). SNA looks at interactions between users which are denoted by (nodes) and (edges) [15]. In this study, three focuses are drawn from the data: promos, Traveloka experiences, and ticket features.

In previous studies, data were collected on Twitter to see the effect of the Traveloka promotion method and determine purchasing decisions using a quantitative approach and regression tests to see the impact on the variables concerned. So that this research can use data collection to find out the social interactions of Traveloka users on Twitter. [16]. Then from the point of view of using the SNA method, previous research discussed key players on Traveloka, Tiket.com, and Pegipegi so that they have different variables and themes and rarely use discussions about promos, Traveloka Xperience and ticket features on the Traveloka application. [17]. Furthermore, previous research using a descriptive analysis method discussed the comparison of the volume of people traveling during the pandemic in Sweden. Showed that there had been quite drastic changes. [3]. So that this research has a gap between analyzing further than before to expand and complement the data generated through the Social Network Analysis (SNA) approach method and so that the analysis in this study is an update of the SNA Method with Traveloka objects and a predetermined focus. Based on the phenomena described above, the researcher has reasons why he analyzed this focus because he saw the effects of the pandemic on Traveloka, which globally showed a decline, so they wanted to explore more deeply the focus on promos, Traveloka Xperience and ticket features during the pandemic. So the formulation of the problem appears. There is a significant difference after the pandemic occurred in terms of promos, Traveloka Xperience, and ticket features from the Traveloka application's tweet analysis data. With the aim of research to analyze and see comparisons before the covid pandemic and during the pandemic it has a significant decrease, knowing what topics of discussion we had discussed interactions between Twitter users on the research focus on Traveloka and as material for evaluating the results of this analysis for the company to continue to develop Traveloka's marketing strategy is to continue to survive and be able to compete with other travel companies in the future and to attract public interest by continuing to create promotional content on various social media so that they can continue to compete with other travel companies..

## II. RESEARCH METHODS

This research is qualitative research which is descriptive and analysis with using the *Social Network Analysis (SNA)* method using Big data. SNA is a network structure on nodes as users and edges as connections [18]. Retrieval

of data through the Twitter API (Application Programming Interface) application as secondary data [19]. By connecting Twitter social media users to Traveloka Ecommerce, data is taken via tweets to search for keywords on Twitter users as data to be tested, which topic or theme uses the marketing content used by Traveloka, namely promos, Traveloka Xperience, and ticket features (a combination of several keywords for airplane tickets, buses, trains, and hotels). Researcher data collection focused on before the COVID-19 pandemic in 2017-2019 and after the COVID-19 pandemic in 2020-2022 with a withdrawal limit of 2000 data every three years of withdrawal and limited to using only Indonesian. This research only focuses on data mining to obtain information visualization from Traveloka data via social media Twitter to analyze the network results from data processing. Information visualization is engineering to display information by making images, graphs, diagrams, or animations [20]. This research assisted by using Anaconda software with Python-based Jupyter Notebook Tools, libraries such as SNScrape, and other tools that support this research. Google Colab, Dictionary, Notepad++, Wordij and Gephi.

A. Research Flow

The first research flow by looking at the phenomena that existed in Traveloka during the pandemic and continued to identify the problems or topics obtained from the phenomenon in the form of a problem statement, namely looking at significant comparisons during the pandemic on Twitter by determining the content to be retrieved as data objects (Table 1). Research, namely promos, Traveloka Xperience, and ticket features on Traveloka. In collecting this data using Jupyter tools which speak Python and are assisted by the Scape library, the information is generated in the form of writing or tweets related to the research object within the specified time range. The data results are in the form of tweets in Indonesian, and the consequences of this crawling data are in CSV format. Data Processing or case folding has three stages. Namely, Normalization is normalizing data with the same value, then Tokenizing is filtering text, separating pieces of letters, numbers, symbols, and punctuation marks. Then finally, filtering (stopword) to normalize non-standard words to make it easier to analyze data.

After processing data, network structure, and several topic groups that occur in interactions between Traveloka users, this data processing is data visualization assisted by Gephi tools and summarizing network property value data. From these results, you can see the keywords or topics that are widely discussed on Twitter media. Network data analysis is planning on the resulting data and seeing the magnitude of the influence of the data on the promo keywords, Traveloka Xperience, and the ticket feature with Traveloka. In the final process, namely summarizing the research results to prove that the SNA method crawling data on Jupyter and using Ghepi software has advantages for

organizations. Twitter social media is also essential because it provides insight into marketing on the Traveloka marketplace.

In the Visualization process on Gephi



Figure 1 Statistics Gephi

After the data scraping process continues, the final process uses the Gephi application to get the results of the information visualization obtained from the data on Twitter. Scraping the data produces several files in csv, stw, ptg, stp, pr, and net formats. What is used for visualization produces the final result using a net format file entered into the Gephi software to create information visualization. And some that must be run on Gephi, namely: *Average Degree* is the average number obtained between the edges that connect the edges. *Average Weighted Degree* is used to show the average weight of the nodes *Network Diameter* is the maximum distance or the longest distance between nodes in a network *Modularity* is used to view measurement results that produce groups or clusters on the network *Average Path length* is the average distance between one node and other nodes in a network.

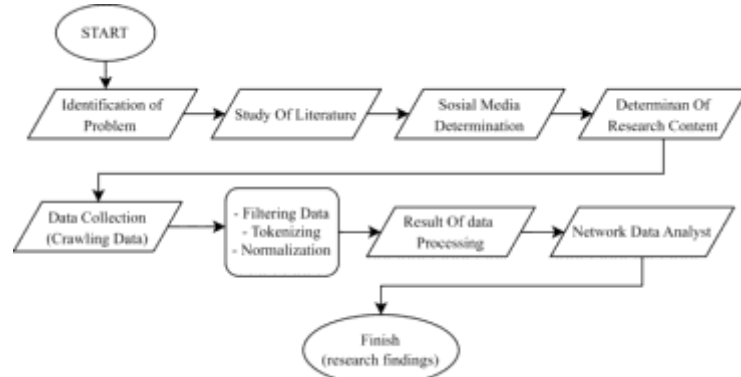


Figure 2 Research Flowchart

III. RESULT AND ANALYSIS

A. Research Result

The first data analysis carried out was crawling data (data collection) using Twitter users with the keywords used.

TABLE I RESULT OF CRAWLING DATA

No	Marketing Content	Year	Amount Of Data
1	Promo	2017-2019	2001
		2020-2022	2001
2	Traveloka Xperience	2017-2019	118
		2020-2022	405
3	Fitur Tiket	2017-2019	2001
		2020-2022	1805

Table I shows the data obtained through crawling data using the software Jupyter notebook and then processed again using Google Collab with keywords that focus on promo content, Traveloka Xperience, and ticket features. The data obtained for the promo keywords have the same amount of data. Then for Traveloka Xperience keywords, more extensive data in 2020-2022. Then for the last keyword, ticket features obtained through several keywords (plane tickets, bus, train, and hotel) are combined and filtered using a Jupyter notebook to remove duplicate words to get more significant data in 2017-2019.

TABLE II RESULT OF WORDJI

NO	Focus	Year	Total Number of Words	Unique Word	Average Word Frequency
1	Promo	2017-2019	20676	714	28.957983
		2020-2022	15822	560	28.253571
2	Traveloka Xperience	2017-2019	809	104	7.778846
		2020-2022	3274	153	21.398693
3	Fitur Tiket	2017-2019	83028	2.969	27.964971
		2020-2022	43683	1456	30.002060

Table II is the result of data processing using Wordjij, and the table contains the total number of words that appear from the promo keywords, the more significant number of words in 2017-2019, then the unique word promo 2017-2019 has more extensive data and more word frequency effective in 2017-2019. In the keyword, Traveloka experience, the data from Wordjij obtained more comprehensive data, namely in 2020-2022. then the last

keyword is the ticket feature, a combination of several keywords from the airplane ticket, bus, train, and hotel ticket features combined to become one keyword data ticket feature that obtained more data in 2017-2019. Next is the fourth process, namely data visualization, the concept from SNA used is graph theory which consists of nodes (nodes or points) connected by edges (links or lines).

Content Marketing Related “Promo”

The following is a network property set in the Gephi software to get visualization results like the picture below.

TABLE III PROMO NETWORK PROPERTIES 2017-2019 2020-2022

No	Network Property	Promo 2017-2019	Promo 2020-2022
1	Nodes	103	140
2	Edges	632	660
3	Average Degree	12.272	9.429
4	Average Weighted Degree	271.845	233.957
5	Network Diameter	4	5
6	Modularity	0.397	0.359
7	Average Path Length	1.948	2.214

The results from Table III for this network property on the promo keyword on the network properties of nodes obtained more significant data in 2020-2022, namely 140. On Edges, the data is more effective in 2020-2022, with as many as 660. The average degree information is more significant in 2017-2019, as many as 12,272. The Average Weighted Degree data is more extensive in 2017-2019, with as many as 271,845. Then the Network Diameter in 2020-2022 will be five times larger. Then the Modularity data is more extensive in 2017-2019, which is 0.397. Finally, the Average Path Length data for 2020-2022 is more significant than in the previous year, which was 2,214.

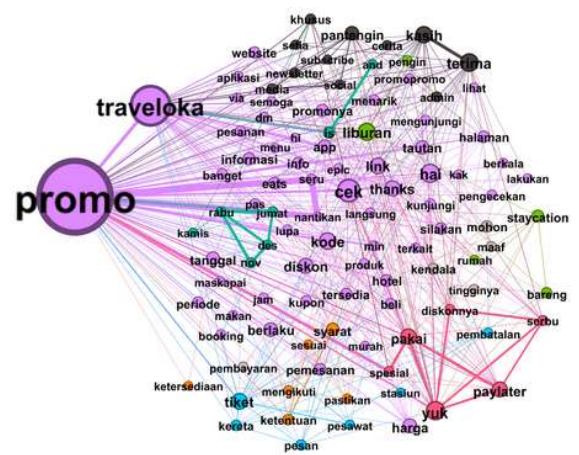


Figure 3 Network Model Visualization of Year 2017-2019 (Promo)

This visualization process in the figure 3, the goal is to

eliminate less relevant tweets and which networks often appear on promo keywords. The thicker the edges indicate, the more substantial the relationship between these networks on the keyword “promo” in 2017-2019. The words that appear and have reasonably strong relationship interjections look forward to the ones, and nodes with a larger circle than the others are discussions often used by Twitter users in the keyword.

The results of data visualization obtained by Traveloka users often discuss "wait," "discounts," "prices," "bookings," and "coupons." From the results that come out, it can be classified as the promo keyword, which means that Traveloka users are always looking forward to events held by Traveloka during the pre-pandemic period. And on the promo keywords, visualized information about the time that Traveloka users often await for promos as support for these promo keywords is indicated by the nodes that appear "period," "Nov," "Dec," and "holiday." This means that users are always looking forward to promos that month, supported by the long year-end holiday that users are always looking forward to before the pandemic. This is a significant advantage for Traveloka by carrying out massive promos to see enthusiastic travellers through visualization information from social media. Twitter.

It can be concluded that travellers and Traveloka users are interested in making purchases because of massive promos and social media advertisements via Twitter and other media [21]. So that Traveloka is expected to continue to carry out promotions to attract users.

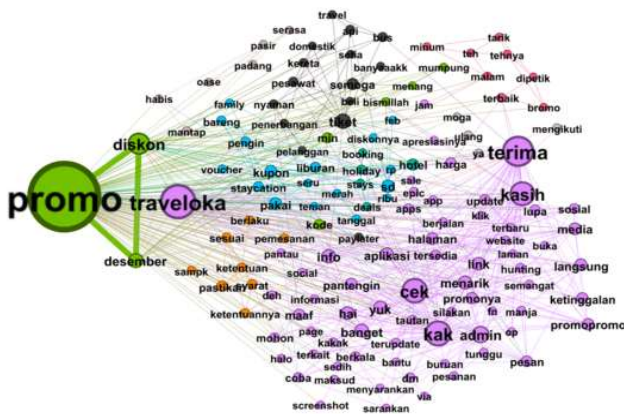


Figure 4 Network Model Visualization of Year 2020-2022 (Promo)

For the 2020-2022 promo, you can see a significant network with thicker edges than the others, namely the word discount, December (Figure 4).

The visualization of the network model with the keyword "promo" for 2020-2022 Traveloka. The visualization results show the nodes that are often discussed by Twitter users discussing Traveloka, namely "Diskon," "December," "interesting," and "update." Traveloka users are interested in updates and promos held by Traveloka at

the end of the year. With the results of visualization of the information obtained, the most anticipated promo classification is indicated by the nodes "staycation", "holiday", "family," "voucher", and "coupon." With this node getting more robust, it shows that the pandemic does not prevent travelers from taking vacation trips at the end of the year with their families or those closest to them which began in 2020 but did not make people unable to use Traveloka promos where travelers and users of Traveloka services are in a condition of revenge travel or can be interpreted as revenge travel post-pandemic grudges, this phenomenon has even been experienced by almost the whole world when the government loosened restrictions on the Covid-19 wave and when everyone had received vaccines and boosters. In the visualization of the 2020-2022 network model, some nodes have quite thick edges, namely the diameter between promos, discounts, and December, which means travellers are looking forward to promos and discounts at the end of the year or in December to go on vacation. An interesting phenomenon in 2020-2022 is that it often appears as a consumer discussion on Twitter: holidays, staycations, discounts, vouchers, and many interconnected edges between nodes. In this way, examples of several tweets from Twitter users discussing promo tweets quoted from 2020-2022

The phenomenon and visualizing the keyword network model for promos for 2020-2022, consumers are still really looking forward to the promos offered by Traveloka because not only are travel promos provided, but there are various other promos such as eats promos, December promos and wanting to do a vacation or staycation at a hotel. From the Gephi results, it was concluded that the results of the information visualization obtained from Traveloka users on the pandemic Twitter, which had become an obstacle for them to travel, showed an increase in Traveloka users who traveled. Traveloka consumers are still heavily influenced by promos, discounts, and promotions to make their purchasing decisions, and this is in line with research [22]. where this research examines tiket.com as a differentiator from current research.

**Content Marketing Related “Traveloka Xperience”**

The following are network properties set in the Gephi software to get visualization results.

TABLE IV NETWORK PROPERTIES TRAVELOKA XPERIENCE 2017-2019 2020-2022

No	Network Properties	Traveloka Xperience 2017-2019	Traveloka Xperience 2020-2022
1	Nodes	104	153
2	Edges	87	173
3	Avarage Degree	1.577	2.261
4	Avarage Weighted Degree	8.615	50.301

No	Network Properties	Traveloka Xperience 2017-2019	Traveloka Xperience 2020-2022
5	Network Diameter	7	8
6	Modularity	0.464	0.259
7	Average Path Length	2.783	2.799

The results from the table 4 of this network property on the Traveloka Xperience keyword on the network property nodes obtained more extensive data in 2020-2022, namely 153. On Edges, after processing more comprehensive data in 2020-2022, there were 173. On average, Degree data was more significant in 2020-2022 by 2,261. The Average Weighted Degree data is more critical in 2020-2022, with as many as 50,301. Furthermore, the Network Diameter for 2020-2022 is 8 times larger. Then the Modularity data is more significant in 2017-2019, which is 0.464. Finally, the Average Path Length data for 2020-2022 is larger than the previous year, which was 2,799



Figure 5 Network Model Visualization Of Traveloka Xperience 2017-2019

The Traveloka Xperience keyword, the word tweet appears from users who connected between users who appear and have solid relationships and nodes that have a circle that is quite large than the others, which is a discussion that is often used by Traveloka Xperience Twitter users in 2017-2019 have equal nodes and edges (Figure 5).

Visualization results of the network model with the keyword "Traveloka Xperience" in 2017-2019, when the COVID-19 pandemic had not yet occurred, and there were still many people unfamiliar with the Traveloka Xperience feature. 2017-2019 The classification of watching tickets is shown, namely "discounts," "vouchers," "cinema," "cinema," and "cgv." And this proves that the information that is often discussed in the Traveloka Xperience information visualization still has few features used. decisions with added discounts and promos offered to make consumers enthusiastic about buying tickets online. It is hoped that Traveloka Xperience will always hold promos and discounts.

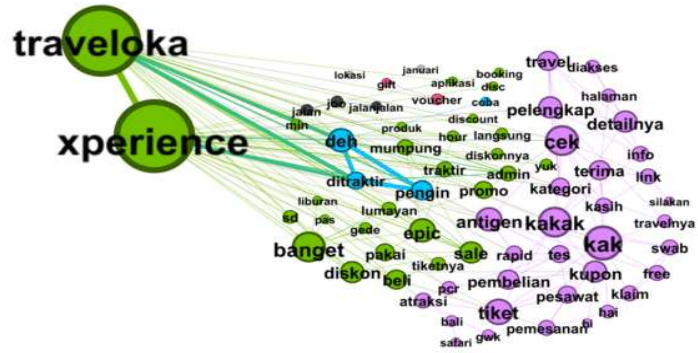


Figure 6 Network Model Visualization Of Traveloka Xperience 2020-2022

The thick edges indicated a connection with the Traveloka Xperience keyword in 2020-2022, like the image above Figure 6. Gephi's visualization shows that the classification of Traveloka Xperience users more often discusses "discount", "promo", "booking" nodes. Which means that in the Traveloka Xperience feature, Traveloka users are also interested in the promo packages offered by Traveloka Xperience. Not only about holidays, the focus of this traveloka experience is getting visual information about COVID-19 shown on the "rapid", "swab", "pcr" nodes. Even though traveloka xperience users are on vacation, they don't ignore the health regulations that have been made by the government. Traveloka xperience where you can see the difference, the users of the Xperience feature are more enthusiastic about using this feature. After the Covid-19 pandemic, Fiteru Xperience became widely known because of the many promos and advertisement promotions that we carried out. Traveloka and many consumers have tweeted on Twitter spreading Traveloka Xperience promo posters so that many know about it, as seen from the visualization results with more data than before. the effect of revenge travel is where travelers take revenge for holidays when government regulations are starting to relax. Everyone is enthusiastic about using the Traveloka Xperience feature to buy holiday packages and wait for significant discounts. With the Traveloka Xperience feature, users can freely enjoy the entertainment media they want because of the large number of promos and the many packages offered [23].

**Content Marketing Related “Fitur Tiket”**

The following is a network property set in the Gephi software to get visualization results.

TABLE V NETWORK PROPERTIES TRAVELOKA XPERIENCE 2017-2019 2020-2022

No.	Network Properties	Ticket Feature 2017-2019	Ticket Feature 2020-2022
1	Nodes	102	146
2	Edges	566	2420

No.	Network Properties	Ticket Feature 2017-2019	Ticket Feature 2020-2022
3	Avarage Degree	33.151	19.507
4	Avarage Weighted Degree	622.247	431.014
5	Network Diameter	3	3
6	Modularity	0.282	0.479
7	Average Path Length	1.755	1.907

The results from Table V of this network property on the keyword Feature Ticket on the network properties of nodes obtain more extensive data in 2020-2022, namely 146. On Edges, the data is more significant in 2020-2022, as many as 2420. On the Average Degree, the information is more effective in 2017-2019, as many as 19,507. The Average Weighted Degree data is more extensive in 2017-2020, with as many as 622,247. Then Network Diameter obtained the same data, namely 3. Then the Modularity data was more extensive in 2020-2022, which got as many as 0.479. Finally, the Average Path Length data for 2020-2022 is larger than the previous year's 1,907.

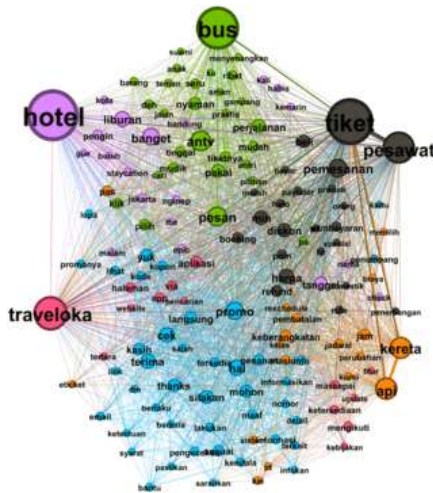


Figure 7 Visualization Of The Ticket Feature Network Model 2017-2019

In the terms of keywords, ticket features in 2017-2019 have nodes (Figure 7).

The results of the visualization of the network model obtained with the keyword "Ticket feature," with data focusing on 2017-2019, show the enthusiasm of Traveloka service users for ticket tickets on Traveloka. Five large nodes indicate a group according to the ticket keyword, which is pulled. The results of the visualization of the phenomenon Consumers often discuss and talk about "Hotels, Buses, Airfare, trains, Traveloka" this phenomenon is equally shared. Each node has a relationship. Visualization of the information obtained from Gephi, several classifications of node flight tickets are often discussed by Twitter users regarding "booking,"

"discounts," "payments," and "pay later." Many users order airplane tickets through Traveloka, and some use pay later as payment. And then, at these bus and hotel nodes, many nodes issue "staycation," "vacation," "going home," and "travel" From there, it can be seen that travelers trust their trips using the Traveloka application. But the results of the information visualization also get a "reschedule," "cancellation," and "refund" node. So Traveloka still has to overcome these problems to continue to retain customers. There are several issues regarding rescheduling or cancellation that need to be addressed by Traveloka to make it easier for travelers and users. The results of the visualization of the 2017-2019 ticket feature consumers place their trust in Traveloka with good service and promos, and discounts and purchase tickets online in the hope that it will be easier and faster. Greatly influences purchasing decisions [24].

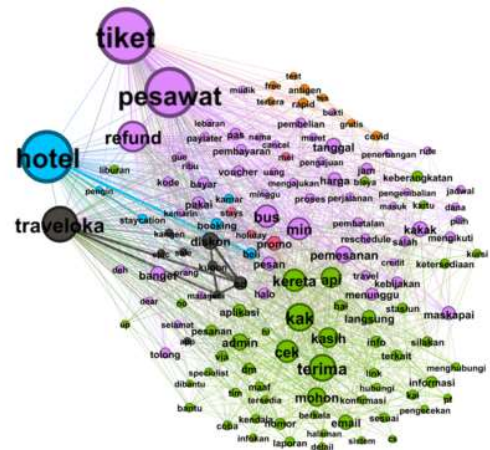


Figure 8 Visualization Of The Ticket Feature Network Model 2020-2022

It will also have several group nodes that often appear in 2020-2022, namely the words "Refunds, Discounts, Orders." like the picture below (Figure 8).

The results of the visualization of the network model carried out on the keyword "ticket feature" in 2020-2022, the period when the Covid-19 pandemic took place, the results of the visualization of this network model show several problems. The information obtained from the Gephi results shows nodes that are classified as "cancellation," "reschedule," and "refund." This means the information obtained from Twitter, Traveloka users are complaining about this all transportation or existing features having problems due to the pandemic Traveloka must immediately handle and simplify the issues that arise, so they are quickly resolved. For airplane tickets, many have ordered and taken vacation trips after the pandemic took place, so the airplane ticket nodes have many interconnected edges. And hotel nodes have thicker Edges to staycations, bookings, and rooms. For the Traveloka node itself, take advantage of the discount node, promos, and coupons. So it can be concluded that the Traveloka ticket feature for 2020-2022 must experience improvements from the system. These many

problems have arisen during the Covid-19 pandemic for the convenience of Traveloka service users. A consumer wants to get good service and comfort so that it creates a feeling of satisfaction and never regrets purchasing these services [25]. From previous research, the trust and security provided by Traveloka make consumers continue to purchase return tickets at Traveloka [26].

#### IV. CONCLUSION

The result analysis with a focus on Promos, Traveloka Xperience, and Ticket Features the results of this information visualization there are differences in data results obtained between the pre-pandemic period and the pandemic/after-pandemic period. Where is a focus that shows the increase and decrease in user interaction? For example, promos have a difference where there were more before the pandemic, and this Traveloka Xperience shows a pretty drastic increase after the pandemic because many people have experienced revenge travel after the pandemic with this feature people like because of the many discounts or promos. And finally, the ticket feature has decreased quite drastically when viewed from the nodes and edges that appear during the pandemic, namely ticket refunds or ticket cancellations due to large-scale restrictions so that people cannot go anywhere. The results of this analysis concluded that the differences during the pandemic have a significant difference.

This study implies that people use Traveloka a lot, especially for promos, discounts, or the latest features available at Traveloka, so Traveloka continues to improve it to rise after the pandemic by continuing to work with big brands or companies or adding new features. Make it easy for consumers. Analysis using the SNA method, which analyzes Twitter user interactions with Traveloka, is expected to be able to evaluate Twitter user reviews which can become a broader marketing strategy to attract public interest and continue to create promotional content on various social media to continue to compete with travel companies. Other. This research has limitations in analyzing because the data collected is only through Twitter, one of the social media, so it needs to be more comprehensive to see the number of Traveloka users. It is recommended that further research be analyzed apart from focusing on this research to obtain broader data to see marketing strategies that Traveloka can carry out. For further study, it is recommended to explore using a qualitative approach to broaden the discussion and use other variables in the Traveloka application.

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